

TABLE II.—Record of temperature observations made at *Havre de Grace, Md.*, and on the *Delaware River*, on the U. S. Fish Commission steamer *Lookout*, from May 1 to May 10, 1886.

Date.	Temperature of air.			Temperature of surface water.			Temperature of bottom.			Condition of sky.		
	8 a. m.	4 p. m.	12 mid-night.	8 a. m.	4 p. m.	12 mid-night.	8 a. m.	4 p. m.	12 mid-night.	8 a. m.	4 p. m.	12 mid-night.
1886.	°	°	°	°	°	°	°	°	°			
May 1*	50	56	52	58	60	56	58	58	58	Overcast	Overcast	Overcast.
2	55	72	53	57	61	59	59	60	59	Clear	Clear	Clear.
3	70	80	54	62	62	59	59	60	59	do	Partly Cloudy	Do.
4	66	75	64	60	62	61	60	60	61	do	Cloudy.	Cloudy.
5	66	78	62	61	62	62	60	62	62	do	do	Overcast.
6	70	80	58	61	64	61	61	63	61	Cloudy	do	Clear.
7	67	60	64	62	63	61	61	63	61	Clear	Rain	Rain.
8	64	59	58	61	63	59	61	63	59	Cloudy	Cloudy	Cloudy.
9	60	75	70	58	63	61	58	63	60	Clear	Clear	Do.
10	65	78	.....	60	62	.....	60	62	.....	Cloudy	do	

Date.	Wind, direction.			Wind, intensity.			State of tide.		
	8 a. m.	4 p. m.	12 mid-night.	8 a. m.	4 p. m.	12 mid-night.	8 a. m.	4 p. m.	12 mid-night.
1886.									
May 1*	NE.	NE.	NE.	9	8	9	Flood	Ebb	Flood.
2	NE.	NE.	NE.	8	5	4	Ebb	do	Do.
3	Calm.	SW.	SW.	0	1	2	do	do	Do.
4	SW.	SSW.	S.	1	3	2	do	do	Do.
5	SW.	SW.	SE.	4	7	3	do	do	Do.
6	NE.	NW.	S.	1	1	1	do	do	Do.
7	E.	NE.	NE.	3	3	10	do	Flood	Do.
8	NE.	NE.	NW.	4	10	3	do	Ebb	Do.
9	NW.	Calm.	Calm.	3	0	0	do	do	Do.
10	SE.	Calm.	.....	2	0	.....	do	do	Do.

* The bottom thermometer in use was No. 5264.

91.—CATCH OF SHAD IN CONNECTICUT FOR 1886.

By ROBERT B. CHALKER.

The statistics of the catch of shad for the year 1886 in the State of Connecticut are as follows :

POUND FISHERIES.

From the mouth of the Connecticut River to New Haven Harbor:

15 traps in Saybrook	23,200
22 traps in Westbrook	34,300
11 traps in Clinton	12,400
10 traps in Madison	5,100
7 traps in Guilford	1,100
7 traps in Branford	3,300
3 traps in East Haven	800

Total shore fisheries 80,200

RIVER FISHERIES.

Thames River.....		45
Connecticut River and tributaries:		
Hauling-seines.....	12,000	
Gill-nets:		
33 from Saybrook Bar to Essex Reach.....	21,500	
5 at Essex Reach.....	2,500	
5 at Brockway's Reach.....	2,700	
12 at Chester Reach.....	7,800	
		46,500
Quinepiac River, 7 hauling-seines.....		3,000
Housatonic River:		
12 hauling-seines.....	16,800	
52 gill-nets.....	8,000	
		24,800
Total river fisheries.....		74,345
Total catch of shad in the State.....		154,545

The fishermen have no theory regarding the remarkable decrease in the catch of shad this year,* as the weather and the condition of the water were what have always been considered favorable. The shad did not appear upon the coast in schools as usual, but the daily catch was very uniform, and the fish were large and good; those weighing 7 pounds were frequently taken. It is a remarkable fact that no alewives were seen in the Thames either before or during the season. The first shad was caught in the Connecticut River, at Essex Reach, on April 2; the next was caught in a gill-net, weight 5 pounds; and the first caught by the shore fishermen was in a pound 8 miles west of the mouth of the river, on April 16. There were none caught in the pounds directly at the mouth of the Connecticut till April 24. The contract price for the season was 15 cents per shad, delivered at the packing places. The average price of those sold by commission dealers was 25 cents.

As heretofore, the river fishermen speak of the dead shad and other fish seen floating on the water. It is their opinion that it is caused by the pollution of the streams.

SAYBROOK, CONN., *August 20, 1886.*

* An editorial in the Hartford Times of June 22, 1886, says: The reasons given for the decrease are many and varied; but upon one fact all fishermen agree, that since the building of the new jetties at Saybrook Point, very few shad have entered the Connecticut River.

The Connecticut fish commissioners in their annual report for 1886 say: "It is difficult to account for these facts on any other theory than that the number of shad is gradually decreasing in consequence of the increased demand for them and the constantly improving methods of capturing them. In other words, it is simply a question whether the natural propagation of the shad, combined with the operations of the commissioners along the coast in artificial hatching, shall prove sufficient to supply the demand of a constantly increasing population."